

## Refine Search

### Search Results -

Terms	Documents
L1.clm.	2

**Database:**

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**Count**   **Set**  
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*DB=PGPB; PLUR=YES; OP=OR*

L2   L1.clm.

2   L2

L1   (optical adj1 (disk or disc)) same (control\$4 near3 (board or card)) same (external or remote or separate\$2)

47   L1

END OF SEARCH HISTORY

## Refine Search

### Search Results -

Terms	Documents
(optical adj1 (disk or disc)) same (control\$4 near3 (board or card)) same (external or remote or separate\$2) and L3	2

Database:

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	DB=PGPB,USPT,USOC; PLUR=YES; OP=OR		
<u>L4</u>	(optical adj1 (disk or disc)) same (control\$4 near3 (board or card)) same (external or remote or separate\$2) and l3	2	<u>L4</u>
<u>L3</u>	720/652,653.ccls.	52	<u>L3</u>
	DB=PGPB; PLUR=YES; OP=OR		
<u>L2</u>	L1.clm.	2	<u>L2</u>
<u>L1</u>	(optical adj1 (disk or disc)) same (control\$4 near3 (board or card)) same (external or remote or separate\$2)	47	<u>L1</u>

END OF SEARCH HISTORY

## Refine Search

### Search Results -

Terms	Documents
L1 same (driv\$3 adj1 unit)	33

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L4





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	<i>DB=PGPB,USPT,USOC; PLUR=YES; OP=OR</i>		
<u>L4</u>	L1 same (driv\$3 adj1 unit)	33	<u>L4</u>
<u>L3</u>	L1 same driving	170	<u>L3</u>
<u>L2</u>	L1 same (driving adj1 unit)	2	<u>L2</u>
<u>L1</u>	(disk or disc) same (control\$4 near3 (board or card)) same (external or remote or separate\$2)	1913	<u>L1</u>

END OF SEARCH HISTORY

## Refine Search

### Search Results -

Terms	Documents
L1 same (driv\$3 adj1 unit)	0

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Search:

L5





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<i>DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>		
<u>L5</u> L1 same (driv\$3 adj1 unit)	0	<u>L5</u>
<i>DB=PGPB,USPT,USOC; PLUR=YES; OP=OR</i>		
<u>L4</u> L1 same (driv\$3 adj1 unit)	33	<u>L4</u>
<u>L3</u> L1 same driving	170	<u>L3</u>
<u>L2</u> L1 same (driving adj1 unit)	2	<u>L2</u>
<u>L1</u> (disk or disc) same (control\$4 near3 (board or card)) same (external or remote or separate\$2)	1913	<u>L1</u>

END OF SEARCH HISTORY

Refine Search

Search Results -

Terms	Documents
L1 same (driv\$3 adj1 unit)	2

Database:

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<i>DB=PGPB,USPT,USOC; PLUR=YES; OP=OR</i>			
<u>L2</u>	L1 same (driv\$3 adj1 unit)	2	<u>L2</u>
<u>L1</u>	(optical adj1 (disk or disc)) same (control\$4 near3 (board or card)) same (external or remote or separate\$2)	101	<u>L1</u>

END OF SEARCH HISTORY

## Refine Search

### Search Results -

Terms	Documents
L1 same (driv\$3 adj1 unit)	0

Database:

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Search:

L3





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<i>DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>		
<u>L3</u> L1 same (driv\$3 adj1 unit)	0	<u>L3</u>
<i>DB=PGPB,USPT,USOC; PLUR=YES; OP=OR</i>		
<u>L2</u> L1 same (driv\$3 adj1 unit)	2	<u>L2</u>
<u>L1</u> (optical adj1 (disk or disc)) same (control\$4 near3 (board or card)) same (external or remote or separate\$2)	101	<u>L1</u>

END OF SEARCH HISTORY

## Refine Search

### Search Results -

Terms	Documents
L1 same ((driv\$3 adj1 unit) or head)	8

Database:

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	<i>DB=PGPB,USPT,USOC; PLUR=YES; OP=OR</i>		
<u>L4</u>	L1 same ((driv\$3 adj1 unit) or head)	8	<u>L4</u>
	<i>DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>		
<u>L3</u>	L1 same (driv\$3 adj1 unit)	0	<u>L3</u>
	<i>DB=PGPB,USPT,USOC; PLUR=YES; OP=OR</i>		
<u>L2</u>	L1 same (driv\$3 adj1 unit)	2	<u>L2</u>
<u>L1</u>	(optical adj1 (disk or disc)) same (control\$4 near3 (board or card)) same (external or remote or separate\$2)	101	<u>L1</u>

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L4: Entry 4 of 8

File: PGPB

Sep 16, 2004

PGPUB-DOCUMENT-NUMBER: 20040181624  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20040181624 A1

TITLE: Optical disc drive

PUBLICATION-DATE: September 16, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Bae, Byoung-young	Suwon-si		KR
Hong, Soon-kyo	Seoul		KR

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE CODE
Samsung Electronics, Co., Ltd.	Suwon-City		KR	03

APPL-NO: 10/743327 [\[PALM\]](#)  
DATE FILED: December 23, 2003

## FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
KR	2002-85444	2002KR-2002-85444	December 27, 2002

INT-CL-PUBLISHED: [07] [G06](#) [F](#) [13/00](#)

US-CL-PUBLISHED: 710/100

US-CL-CURRENT: [710/100](#)

REPRESENTATIVE-FIGURES: 2

## ABSTRACT:

An optical disc drive that includes a driving unit including a spindle motor to rotate an optical disc, an optical pickup to access the optical disc, and a connection board connected to a computer. A control board to control the driving unit, is installed at an interface device of the computer, separate from the driving unit, and is connected to the connection board.

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## Refine Search

### Search Results -

Terms	Documents
L1 and L5	3

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<i>DB=PGPB,USPT,USOC; PLUR=YES; OP=OR</i>		
<u>L6</u> L1 and L5	3	<u>L6</u>
<u>L5</u> 710/100,300,301,313,315,1;235/454;369/18,24.01,47.1,44.31;711/111,112.ccls.	8886	<u>L5</u>
<u>L4</u> L1 same ((driv\$3 adj1 unit) or head)	8	<u>L4</u>
<i>DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>		
<u>L3</u> L1 same (driv\$3 adj1 unit)	0	<u>L3</u>
<i>DB=PGPB,USPT,USOC; PLUR=YES; OP=OR</i>		
<u>L2</u> L1 same (driv\$3 adj1 unit)	2	<u>L2</u>
<u>L1</u> (optical adj1 (disk or disc)) same (control\$4 near3 (board or card)) same (external or remote or separate\$2)	101	<u>L1</u>

END OF SEARCH HISTORY

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comment	Error	Definit	Er
1	BRS	L1	54	(optical adj1 (disk or disc)) same (contr 11 same driv\$3	USPA	2006/02/13 12:50				
2	BRS	L2	22	11 same driv\$3	USPA	2006/02/13 12:51				

**EAST - [Untitled1:1]**

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     L1: (54) (optical adjl  
     L2: (22) ll same driv\$3  
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☐ UDC  
☐ Queue  
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ll same driv\$3

	U	1	Document ID	Issue Dat	Pages	Title	Current OR	Current X
1	<input type="checkbox"/>	<input type="checkbox"/>	US 6947041 B2	20050920	17	Image processing method	345/428	345/419
2	<input type="checkbox"/>	<input type="checkbox"/>	US 6910218 B2	20050621	14	Slim type optical disc drive	720/653	720/613
3	<input type="checkbox"/>	<input type="checkbox"/>	US 6894880 B2	20050517	9	Protection circuit for semiconductor laser dev	361/56	361/111
4	<input type="checkbox"/>	<input type="checkbox"/>	US 6761635 B2	20040713	36	Remote-control signal receiver	463/39	348/734; 463/37
5	<input type="checkbox"/>	<input type="checkbox"/>	US 6693868 B2	20040217	46	Disc drive having feed chassis supporting memb	720/622	
6	<input type="checkbox"/>	<input type="checkbox"/>	US 6667853 B2	20031223	9	Holding structure of indicating displav devi	360/137	720/657
7	<input type="checkbox"/>	<input type="checkbox"/>	US 6016386 A	20000118	61	Image forming system for preparing subsequen	358/1.15	358/1.17; 358/403;
8	<input type="checkbox"/>	<input type="checkbox"/>	US 5983318 A	19991109	17	Maximizing hit ratio in an automated storage li	711/113	369/30.31 369/30.34
9	<input type="checkbox"/>	<input type="checkbox"/>	US RE36286 E	19990831	25	Preemptive demount in an automated storage li	710/8	369/30.32
10	<input type="checkbox"/>	<input type="checkbox"/>	US 5682227 A	19971028	91	Royalty accounting system for a book copie	355/25	377/8; 399/362;
11	<input type="checkbox"/>	<input type="checkbox"/>	US 5675149	19971007	10	Compact thermal camera	250/332	250/330;



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## \* Key

IEEE JNL IEEE Journal or Magazine

IEEE JNL IEEE Journal or Magazine

IEEE CNF IEEE Conference Proceeding

IEEE CNF IEEE Conference Proceeding

IEEE STD IEEE Standard

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## 1. Parallel file striping on optical jukebox servers

Tarraga, J.; Hersch, R.D.;

[Multimedia and Expo. 2002. ICME '02. Proceedings. 2002 IEEE International Conference on](#)

Volume 2, 26-29 Aug. 2002 Page(s):173 - 176 vol.2

Digital Object Identifier 10.1109/ICME.2002.1035541

[AbstractPlus](#) | Full Text: [PDF\(559 KB\)](#) IEEE CNF[Rights and Permissions](#)

## 2. Small form factor optical drive: miniaturized plastic high-NA objective and optical drive

van der Aa, M.A.H.; van As, M.A.J.; Braun, A.L.; Hendriks, B.H.W.; Liedenbaum, C.T.H.; van Rompaey, B.; van Rosmalen, G.E.; Schleipen, J.J.H.B.; Borg, H.J.; Nijse, G.J.P.; Nuijens, P.G.; van Aken, N.P.D.M.; Jutte, P.T.; Renckens, J.M.G.; van Steen, R.I.; Bramwell, S.; Stavely, P.;

[Optical Memory and Optical Data Storage Topical Meeting. 2002. International Symposium on](#)

7-11 July 2002 Page(s):251 - 253

Digital Object Identifier 10.1109/OMODS.2002.1028631

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## Small form factor optical drive: miniaturized plastic high-NA objective and optical drive

van der Aa, M.A.H., van As, M.A.J., Braun, A.L., Hendriks, B.H.W., Liedenbaum, C.T.H., van Rompaey, B., van Rosmalen, G.E., Schleipen, J.J.H.B., Borg, H.J., Nijse, G.J.P., Nuijens, P.G., van Aken, N.P.D.M., Jute, P.T., Renckens, J.M.G., van Steen, R.J., Bramwell, S., Stavely, P.

Philips Res. Labs., Eindhoven, Netherlands

This paper appears in: Optical Memory and Optical Data Storage Topical Meeting, 2002. International Symposium on

Publication Date: 7-11 July 2002

On page(s): 251 - 253

Number of Pages: (xiii+439+ii+70 suppl.)

ISSN:

INSPEC Accession Number: 7492349

Digital Object Identifier: 10.1109/OMODS.2002.1028631

Posted online: 2002-11-07 17:06:17.0

## Abstract

Recent developments in portable consumer devices call for storage systems solutions using compact drive units and cheap storage media. A major advantage of conventional optical storage is the intrinsic low media cost and the ease of manufacturing of replicated ROM media. Third generation optical storage, using a blue laser and a high numerical aperture objective lens, is a perfect technology candidate for a small form factor optical (SFFO) drive. Using third generation optical storage technology 27 GBytes becomes available on a 12 cm optical disc. Using this data density for an SFFO drive, a storage capacity of over 1 Gbytes become feasible on a coin-sized disc. In this paper we report the realization of a SFFO drive, featuring 1 Gbytes on a 30 mm rewritable optical disc, with dimensions comparable to Compact Flash PCMCIA-like drives. Our main focus in this paper is on the miniaturization of the basic components of the SFFO drive, such as disc, objective and 2D-actuator. Related subjects in Philips R&D are miniature optics and low-dissipation/high-integration electronics.

## Index Terms

## Inspec

## Controlled Indexing

disc drives electromagnetic actuators microlenses optical disc storage optical testing semiconductor lasers

## Non-controlled Indexing

1 Gbyte 12 cm 27 Gbyte 2D-actuators 30 mm Compact Flash PCMCIA-like drives ROM media manufacture/replication SFFO drive data density blue laser diodes cheap storage media coin-sized disc compact drive units drive storage capacity low-dissipation/high-integration electronics miniature optics miniaturized optical disk drives objective lens numerical aperture optical storage system media cost plastic high-NA objectives portable consumer devices rewritable optical disc size small form factor optical drives storage systems solutions

## Author Keywords

Not Available

## References

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## Citing Documents

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Display Format: ☒ Citation ☐ Citation & Abstract

IEEE JNL IEEE Journal or Magazine

IEEE JNL IEEE Journal or Magazine

IEEE CNF IEEE Conference Proceeding

IEEE CNF IEEE Conference Proceeding

IEEE STD IEEE Standard

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